

What is claimed is:

1. A planographic printing plate precursor, comprising:
a substrate;
a photosensitive layer comprising an IR absorber, a polymerization initiator, a polymerizable compound and a binder polymer; and
a protective layer containing a UV absorber,
disposed in this order,
wherein the photosensitive layer exhibits reduction in solubility in an alkaline developing solution upon being exposed to light having a wavelength of 750 nm to 1400 nm.

2. The planographic printing plate precursor of claim 1, wherein the UV absorber has a maximum absorption at a wavelength in a range of 300 to 420 nm.

3. The planographic printing plate precursor of claim 1, wherein the photosensitive layer further comprises a compound containing at least one carboxylic group and having a weight-average molecular weight of 3000 or less.

4. The planographic printing plate precursor of claim 3, wherein the compound containing at least one carboxylic group is one selected from the group consisting of a phthalic acid derivative, a trimellitic acid derivative, a pyromellitic acid derivative, a succinic acid derivative, a

benzoic acid derivative and a glycine derivative.

5. The planographic printing plate precursor of claim 1, wherein a developing rate of an unexposed portion of the photosensitive layer by an alkaline developing solution having a pH of 10 to 13.5 is 80 nm/sec or more, and a permeation rate of the alkaline developing solution to an exposed portion of the photosensitive layer is 100 nF/sec or less.

6. The planographic printing plate precursor of claim 1, wherein the IR absorber is one selected from the group consisting of a cyanine dye, a squarylium dye, a pyrylium salt, a nickel/thiolate complex and an indolenine cyanine dye.

7. The planographic printing plate precursor of claim 1, wherein the IR absorber is a pigment having a particle diameter of 0.01 to 10 μm .

8. The planographic printing plate precursor of claim 1, wherein an absorbance of the photosensitive layer at a maximum absorption wavelength in a range of 760 to 1200 nm is 0.5 to 1.2 measured by a reflection measurement method.

9. The planographic printing plate precursor of claim 1, wherein the polymerization initiator is a radical-generating agent which is decomposed by heat to generate radicals.

10. The planographic printing plate precursor of claim 9, wherein the radical-generating agent is an onium salt.

11. The planographic printing plate precursor of claim 1, wherein the polymerization initiator is contained in the photosensitive layer in an amount of 0.1 to 50% by mass based on a total solid content of the photosensitive layer.

12. The planographic printing plate precursor of claim 1, wherein an acid value (meg/g) of the binder polymer is in a range of 2.00 to 3.60.

13. The planographic printing plate precursor of claim 1, wherein the binder polymer has a radical-polymerizable group.

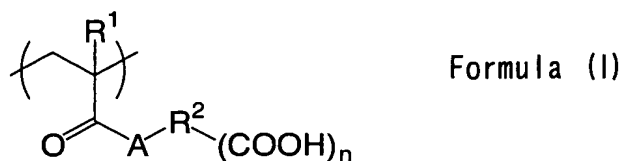
14. The planographic printing plate precursor of claim 1, wherein the binder polymer has an alkali-soluble group.

15. The planographic printing plate precursor of claim 1, wherein the binder polymer has a weight-average molecular weight of 2,000 to 1,000,000.

16. The planographic printing plate precursor of claim 1, wherein the binder polymer has a glass transition point (T_g) of 70 to 300°C.

17. The planographic printing plate precursor of claim 1, wherein

the binder polymer comprises a repeating unit represented by the following formula (I):



wherein R^1 represents a hydrogen atom or a methyl group; R^2 represents a linking group composed of atoms selected from carbon atoms, hydrogen atoms, oxygen atoms, nitrogen atoms, sulfur atoms and halogen atoms, wherein a number of atoms excluding atoms in a substituent group is 2 to 30; A represents an oxygen atom or $-\text{NR}^3-$ wherein R^3 represents a hydrogen atom or a monovalent hydrocarbon group having 1 to 10 carbon atoms; and n is an integer from 1 to 5.

18. The planographic printing plate precursor of claim 1, wherein the UV absorber is one selected from the group consisting of a benzotriazole compound substituted with an aryl group, a 4-thiazolidone compound, a benzophenone compound, a cinnamate compound, a butadiene compound, a benzoxazole compound and a UV absorbing polymer.

19. The planographic printing plate precursor of claim 1, further comprising an intermediate layer between the photosensitive layer and the substrate.